

	One specific PID				All PIDs			
	.txt		.bin		.txt		.bin	
	time	Size (bytes)	time	Size (bytes)	time	Size (bytes)	time	Size (bytes)
Trial 1	0m0.016s	1751	0m0.015s	1436	0m0.039s	160889	0m0.030s	136874
Trial 2	0m0.015s	1751	0m0.016s	1436	0m0.038s	158092	0m0.038s	142275
Trial 3	0m0.018s	1751	0m0.018s	1436	0m0.052s	158170	0m0.045s	141362
Trial 4	0m0.019s	1751	0m0.015s	1436	0m0.023s	153174	0m0.045s	138781
Trial 5	0m0.019s	1751	0m0.014s	1436	0m0.034s	158006	0m0.039s	141361
Average	0m0.0174 s	1751	0m0.0156 s	1436	0.0372 s	157666.2	0.0394 s	140130.6
Std Deviation	3.3E-6	0	0.0015165751	0	0.010425929 s	2789.1255	0.0061886994 s	2239.1709

When executing the program with the shell command 'time' and the arguments, '--output\_TXT', and '--output\_binary', it was observed that on average, binary files take up less space and require less time to be created than text files in ASCII format. ASCII encoding assigns a unique number to each character in the English language, which is represented by 7 bits. This means that an ASCII file can only store a maximum of 128 different characters. On the other hand, binary encoding represents data using a sequence of 0s and 1s, which requires fewer bits to store the same amount of information as ASCII encoding, resulting in smaller file sizes. In addition, binary files are typically faster to read and write than ASCII files, as evidenced by the comparison of time and size in the chart above. For smaller amounts of data, binary encoding is faster and takes up less space than ASCII encoding (as in the case of a single PID), but for larger amounts of data, it is better to use ASCII encoding.